1/1	8
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FIG. 1A-1

FIG. 1A

FIG. 1A-2

FIG. 1A-1

120	240	360	480	009	120	840	096
gtattteoto ooocogogog gotegeoggo ggeeggeet etgaeteetg gtggotggga etogggogte ogagteooge eetgaetgge tgogggeggg e N E	RGICTCIGCG GGGICCIGGI RITICIGCIG CIGGCIGCRG GRCIGCCGCI CCRGGCGGCC RRGCGGIICC GIGRIGICI GGGCCRIGRG CRGIRI <u>CCGG RICRCRIGRG GGRGRRCARC</u>	STEE OF THE STATE OF THE CONTROCRES PROCESSES ASSESSES OF THE STATE OF	ACCROTORIT CACCOCCTI GOIGGOTTCC RATATCACCI TCOTAGIGAR CCIGGIGIIC CCCRGRIGCC RGRAGGARGA TGCCRACGGC ARIATCGICI RIGRAGGARGARGI CIGCRGARGI S P R L V F R R C R S F C D R F G H L V Y E R N C R S	CATTIGENCE TGGCTICTER CCCGTATGTC TACAACTGGA CCACAGGGG AGACGATGAG GACTGGGAAG ACAACACCAG CCAAGGCCAG CACCTCAGGT TCCCCGACGG GAAGCCCTTC	D L E L H S D P Y O Y M M I I G M O D E D M E D M I S Q G Q H L M P P D G K P P CCICCCCCC ACGGACGGAA GARAIGGAAC TICGICIACG ICTICCACAC ACTIGGICAG IATITICAAR AGCIGGGICA GIGIICAGCA CGAGITICIA TAAACACAGI CAACTIGACA	PRPRCCIC RESIDENTIS RESIDENTIS FOR FROM THE CONTROCT OF THE CONTROCT OF THE CONTROL OF THE CONTROCT CONTROL OF THE CONTROCT OF THE CONTROCT OF THE CONTROL OF THE CONTROL OF THE CONTROCT OF THE CONTROL	U G P Q U N E U I U F R R H G R A Y I P I S K U K D U Y U I T D Q I P I F U T N TACCAGARGA ATGACCGGAR CICGICIGAT GARACCTICC TCAGAGACCI CCCCATTITC ITCGATGICC ICATTCACGA ICCCAGGAR TICCICARCT ACICIGCCAT ITCCTACARG Y Q K H D R H S S D E I F L R D L P I F F D U L I H D P S H F L N Y S R I S Y K
c gctccgag	ATCACATGA	0 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RTCRCRCCR	TCCCCACC	TARACACAG	H T U	P I F ACTCTGCCP S R I
(ACTGCCGCT CCRGGCGGCC RRGCGGTTCC GTGRTGTGCT GGGCCRTGRG CRGTRT <u>CCGG RTCRCRTGRG GGRGRRCRI</u>	ICAGCTGTA TCCRGTGTGG AGGAGGGGAG AGGAGGACTCC TGGGAAGGAG GCCGTGTGCA GGCAGCCCT	COTRIGORAR CCTGGTGTTC CCCRGRTGCC RGRGGRAGR TGCCRACGGC RATRICGTCT RTGRGRGGRAR CTGCRGRARG	CACCTCAGGT	II 6 K U U E U W E U M I S Ų 6 Ų H L K F V U G K F F STICCACAC ACTIGGICAG IAITITICAAR AGCIGGGICA GIGTICAGCA CGAGITICIA IAAACACAGI CAACTIGAC	F H T L G Q Y F Q K L G Q C S A A V S I H T V H L T SCCCGGG ATACATICC ATCICCARAGISTIC STARGES STATES ACAGATICAS I CCCTATATT CGTGACCAT	G R R Y I P I S K U K D U Y U I T D Q I P I F U T M SAGAGCET CCCCATTITC TICGATGICC TCATTCACA TCCCAGTCAT TICCTCAACT ACTCIGCCAT TICCTACAA R D L P I F F D U L I H D P S H F L H Y S R I S Y K
cctgactggc	060CCATGRG	GRAGGACTCC K D S	I TGCCAACGGC	CCARGCCCRG	U U U Geteticrocra	C S A	Y U I I TCCCAGTCAT P S H
agagt caage	GTGRTGTGCT	HCCCCACATO	RCARGGARGR	RCRACACCAG	ROCTGGGTCR	L G Q	K D U TCATTCACGA
ctogggogtc	AAGCGGTTCC	ACCACCCAC R	CCCAGATGCC	САСТСССАНС	U U E U IRITICAAR	Y F Q K ATCTCCAAAG	ISKU TTCGATGTCC FOUL
9199019990	ววงววงงหวว ววงววงงหวว	υ η η 1CCAG1G1GG	CCTGGTGTTC	AGACCATGAG	U U E RCTTGGTCRG	L G Q RIACATTCCC	Y I P CCCCATTITIC P I F
ctgactcctg	GACTGCCGCT	AACAGCIGIA O L Y	TCGTAGTGAR	CCACAGGGGC	TCTTCCRCRC	F H T ACGGCCGGG	G R R TCRGAGACCT R O L
ggccggcoct	0100010000	C H H G GARTGGGRTG E H D E	RATATCACCT	TACAACTGGA	Y N U I	F U Y U TITEGRAGAC	F R R H GARACCTTCC E T F L
gotegeoggo	RITICIGCIG	ACATGARATE N	001666TTCC	CCCCTATGTC	P Y U Garatggarg	K U N RGTGRTTGTC	U 1 U CTCGTCTGAT S S D
იიი იიმიმიმ	RGICICIGCG GGGICCIGGI ATTICIGCIG CIGGCIGCAG G	CANTINCOIG CCICOICTIC ACATGARAN GANTGGATG A O L R G U S S O E N E U O E	ACCAGIGATI CACCGGCCTI GGIGGGTICC AATAICACCT	TGCCTTCTGA	CCTCCCCCC ACCGACGGAR GARATGGARC TTCGTCTACG	PRPHGRECCTC AGTCATGGA AGTGATTGTC TITCGAAGAC A	U G P Q U M E U I U F R R H TACCAGAACA ATGACCGGAA CTCGTCGAT GAAACCTTCC TI Y Q K M D R M S S D E T F L
glatticala	RGTCTCTGCG	CARTIACCIC 0 L R G	ACCAGTGATT S 0 S	CATTICGRCC	מרונהניניני	P R P H GTTGGCCTC	U G P Q ТАССАСАНСА V Q K N

1080	1320	140	1560	1680	1800	1920	2040	2160	2280	2320
GARCCII CARCIIITARC CICRCCGIGC ARACIGCRGI GCCGGGRCCA I F N F N L I V Q I A V P G P CARCRCC IRGICCCICI ITARIGCCIA CIGGCIRCAR AICCRIGGRG	T P S P S L N P T G Y K S N E ATGGRANT CCTAGAAGTC AACATCATCC AGGTAGCAGA TGTCCCAATC	GYFRATITIO DGILEUMIIO URD UPI GRCCIGCAR RGGGCCCRCI CCCRCGGRAS CCIGIRCGRI CRICICIGRC CCCRCCIGCC RGAICGCCCR GRACAGGGIG	GRGGAGGGC CTTCARTGGG TCCGGCRCGT ACTGTGTGRA TITCACTCTG GGRGACGATG CRAGCCTGGC CCTCRCCRGC	TONGOMEGACI CANTEST CONTINUE CONTINUE CONTINUE OF CONTINUE CONTINUE OF CONTINU	ICGTGGTCAA GGGCAAAGGC CTGAGTGTTT TTCTCAGCCA TGCAAAAGCC CCGTTCTCCC GAGGAGACCG GGAGAAGGAT.	gcatgta tgtgagctgt gcagaagtac atgactggta gctgttgttt	gtogitooi iggcottita gigaagggal gggaagacag tatticiteg colcigiati giggititta lacigitaat	gatgece caggeteett agattletae acaagatgtg eetgaaceea	oottoto atggooccoo gettgttgta tggtgtgtgt gtgtocotoo	
TGGARCTITG GGGACARCA TGGCCTGTTI GTCTCCARCA ATCACACTTI GAATCACAC TATGTGCTCA ATGGARCCTI CARCTTTARC CTCRCCGTGC AARCTGCRGT GCCGGGACCA W N F G D N T G L F W S N N H T L N N T Y W L N G T F N F N L T W Q T A P G P P C P P T T T C T T T T T T T T T T T	C P S P T P S P S S S T S P S P R S S P T L S T P S P S L H P T G Y K S N E CTONGOTORNO ANACTICCOR ATARACAGAT ATGETTACT CAGGCCACC ATCACARTIC TAGATGGAAT CCTAGAAGTC AACATCATCC AGGTAGCAGA TGTCCCAAT	L S O I S N E N C R I N R Y G Y F R R I I I U D G I L E U N I I Q U R O U P I CCCRCRIGACION CONTROCA ROSCOCCO CONTROCA ROSCOCCO CONTROCA ROSCOCCO CONTROCA ROSCOCCO CONTROCA ROSCOCCO CONTROCA ROSCOCCO ROST ROSCOCCO ROSCOCO ROST ROSCOCIO ROST ROSCOCIO ROST ROSCOCIO ROSTA ROSCOCIO ROST ROSCOCIO ROSTA ROSCOCIO ROSCOCIO ROSCOCIO	-	—	_	O	tttagggag t	agggiggea cattgigict gaaggggggg ggggagtca cigctactia aggicctagg tiaaciggga gaggatgccc caggciccit agatiictac acaagaigig ccigaaccca	gologicolg acctaeeggo calgolical caectolato toagotoali geacalacol gagogooliga iggaaliata aiggeacoaa gotigilgia iggigigigi gigiacalaa	gatacicatt aaaaagacag tctattaaaa aaaaaaaaaa

3/18 poly A signal is position 111614-111619 translation start (ATG) is: Gene: 83385 cDNA: 92 FIG. 1B 162 152 144 176 176 157 318 99 103 209 94 042 cDNA Start cDNA Stop Exon Length 162 314 458 634 791 1109 1208 1311 1520 1614 2656 163 315 459 635 792 1110 1209 1312 1521 83455 89986 90839 93594 96665 97300 103142 104515 110141 BAC Stop 83294 89834 90696 93419 96509 96983 103044 104413 106494 110592 **BAC Start EXON** 45978627 κ C

FIG. 1C

FIG. 2A-1

FIG. 2A-2

FIG. 2A-3

FIG. 2A-4

FIG. 2A-5

FIG. 2A

ATGGAAAGTC TCTGCGGGGT CCTGGTATTT CTGCTGCTGG CTGCAGGACT GCCGCTCCAG GCGGCCAAGC GGTTC	TCTGCGG	36T 36T	CCTGGTATTT	CTGCTGCTGG	CTGCAGGACT (SCCGCTCCAG	SCGCCCAAGC GGTTC	75 75
ATGGAA	AGTC	ATGGAAAGIC ICTACTATIT CCTGGGATIT	CCTGGGATTT	crecrecres	CTGCAAGATT	GCCACTTGAT	CTGCTCCTGG CTGCAAGATT GCCACTTGAT GCCCCCAAAC GATTT	75
CGTGATGTGC		TGGGCCATGA	GCAGTATCCG	GATCACATGA	GGGAGAACAA	CCAATTACGT	CGTGATGTGC TGGGCCATGA GCAGTATCCG GATCACATGA GGGAGAACAA CCAATTACGT GGCTGGTCTT CAGAT	150
CCTCATGTGC		TGGGCCATGA	ACAGTATCCC	GATCACATGA	GAGAGCACAA	CCAATTACGT	mouse CGTGATGTGC TGGGCCATGA ACAGTATCCC GATCACATGA GAGAGCACAA CCAATTACGT GGCTGGTCTT CGGAT	120
CATGATGTGC		TGGCCAATGA	AAGACCTTCT	GCTTACATGA	GGGAGCACAA	TCAATTAAAT	CATGATGTGC TGGGCAATGA AAGACCTTCT GCTTACATGA GGGAGCACAA TCAATTAAAT GGCTGGTCTT CTGAT	150
GAAAATGAAT	_	GGGATGAACA	GCTGTATCCA	GTGTGGAGGA	GGGGAGAGGG	CAGATGGAAG	GAAAATGAAT GGGATGAACA GCTGTATCCA GTGTGGAGGA GGGGAGAGGG CAGATGGAAG GACTCCTGGG AAGGA	225
GAAAATGAAT		GGGATGAACA	CCTGTATCCA	GTGTGGAGGA	GGGGAGACGG	CAGGTGGAAG	mouse GAAAATGAAT GGGATGAACA CCTGTATCCA GTGTGGAGGA GGGGAGACGG CAGGTGGAAG GACTCCTGGG AAGGA	225
GAAAATGACT		GGAATGAAAA	ACTCTACCCA	GTGTGGAAGC	GGGGAGACAT	GAGGTGGAAA	GAAAATGACT GGAATGAAAA ACTCTACCCA GTGTGGAAGC GGGGAGACAT GAGGTGGAAA AACTCCTGGA AGGGA	225
GCCGTGTGC		GCCCTCTGC AGGCAGCCCT AA	AACCAGTGAT	TCACCGGCCT	TGGTGGGTTC	CAATATCACC	CCAGTGAT TCACCGGCCT TGGTGGGTTC CAATATCACC TTCGTAGTGA ACCTG	300
GCCCTGTGC		AGGCAGTCCT	GACCAGTGAC	TCACCGGCTC	TGGTGGGTTC	CAATATCACT	GGCCGTGTGC AGGCAGTCCT GACCAGTGAC TCACCGGCTC TGGTGGGTTC CAATATCACT TTTGTGGTGA ACCTG	300
GGCGTGTGC		AGGCGGTCCT	GACCAGTGAC	TCACCAGCCC	TCGTGGGCTC	AAATATAACA	human GGCCGTGTGC AGGCGGTCCT GACCAGTGAC TCACCAGCCC TCGTGGGCTC AAATATAACA TTTGCGGTGA ACCTG	300

rat	GTGTTCCCCA	GTGTTCCCCA GATGCCAGAA GGAAGATGCC	GGAGGATGCC	AACGGCAATA	AACGGCAATA TCGTCTATGA GAGGAACTGC AGAAGTGATT	GAGGAACTGC	GTGTTCCCCA GATGCCAGAA GGAAGATGCC AACGGCAATA TCGTCTATGA GAGGAACTGC AGAAGTGATT TGGAG	375
mouse	GTGTTCCCCA	GTGTTCCCCA GATGCCAGAA GGAAGATGCT	GGAGGATGCT	AATGGCAATA	AATGGCAATA TCGTCTATGA GAAGAACTGC AGGAATGATT	GAAGAACTGC	GTGTTCCCCA GATGCCAGAA GGAAGATGCT AATGGCAATA TCGTCTATGA GAAGAACTGC AGGAATGATT TGGGA	375
human	ATATTCCCTA	ATATTCCCTA GATGCCAAAA GGAAGATGCC	GGAGGATGCC	AATGGCAACA	AATGGCAACA TAGTCTATGA GAAGAACTGC AGAAATGAGG	GAAGAACTGC	ATATTCCCTA GATGCCAAAA GGAAGATGCC AATGGCAACA TAGTCTATGA GAAGAACTGC AGAAATGAG CTGGT	375
rat	CTGGCTTCTG ACCCGTATGT	ACCCGTATGT C	CTACAACTGG	ACCACAGGGG	ACCACAGGGG CAGACGATGA GGACTGGGAA GACAACACCA	GGACTGGGAA	CTGGCTTCTG ACCCGTATGT CTACAACTGG ACCACAGGGG CAGACGATGA GGACTGGGAA GACAACACCA GCCAA	450
mouse	CTGACATCTG ACCTGCATGT	ACCTGCATGT C	CTACAACTGG	ACTGCAGGGG	ACTGCAGGGG CAGATGATGG TGACTGGGAA GATGGCACCA	TGACTGGGAA	CTGACATCTG ACCTGCATGT CTACAACTGG ACTGCAGGGG CAGATGATGG TGACTGGGAA GATGGCACCA GCCGA	450
human	TTATCTGCTG ATCCATATGT	ATCCATATGT 1	TTACAACTGG	ACAGCATGGT	ACAGCATGGT CAGAGGACAG TGACGGGGAA AATGGCACCG	TGACGGGGAA	TTATCTGCTG ATCCATATGT TTACAACTGG ACAGCATGGT CAGAGGACAG TGACGGGGAA AATGGCACCG GCCAA	450
rat		GGCCAGCACC TCAGGTTCCC CG	CGACGGGAAG	CCCTTCCCTC	ACGGGAAG CCCTTCCCTC GCCCCCACGG ACGGAAGAAA TGGAACTTCG	ACGGAAGAAA	GCCCAGCACC TCAGGTTCCC CGACGGGAAG CCCTTCCCTC GCCCCCACGG ACGGAAGAAA TGGAACTTCG TCTAC	525
mouse		AGCCAGCATC TCAGGTTCCC GG	SGACAGGAGG	CCCTTCCCTC	ACAGGAGG CCCTTCCCTC GCCCCCATGG ATGGAAGAAA TGGAGCTTTG	ATGGAAGAAA	AGCCAGCATC TCAGGTTCCC GGACAGGAGG CCCTTCCCTC GCCCCCATGG ATGGAAGAAA TGGAGCTTTG TCTAC	525
human		AGCCATCATA ACGTCTTCCC TG	FGATGGGAAA	CCTTTTCCTC	ATGGGAAA CCTTTTCCTC ACCACCCCGG ATGGAGAAGA TGGAATTTCA	ATGGAGAAGA	AGCCATCATA ACGTCTTCCC TGATGGGAAA CCTTTTCCTC ACCACCCCGG ATGGAGAAGA TGGAATTTCA TCTAC	525
rat mouse human	6.1	GTCTTCCACA CACTTGGTCA GTATTTTCAA AAGCTGGGTC AGTGTTCAGC ACGAGTTTCT ATAAACACAG GTCTTTCACA CACTTGGCCA GTATTTCCAA AAACTGGGTC GGTGTTCAGC ACGGGTTTCT ATAAACACAG GTCTTCCACA CACTTGGTCA GTATTTCCAG AAATTGGGAC GATGTTCAGT GAGAGTTTCT GTGAACACAG	STATTTCAA STATTTCCAA STATTTCCAG	AAGCTGGGTC AAACTGGGTC AAATTGGGAC	AAGCTGGGTC AGTGTTCAGC ACGAGTTTCT AAACTGGGTC GGTGTTCAGC ACGGGTTTCT AAATTGGGAC GATGTTCAGT GAGAGTTTCT	ACGAGTTTCT ACGGGTTTCT GAGAGTTTCT	GTCTTCCACA CACTTGGTCA GTATTTTCAA AAGCTGGGTC AGTGTTCAGC ACGAGTTTCT ATAAACACAG TCAAC GTCTTTCACA CACTTGGCCA GTATTTCCAA AAACTGGGTC GGTGTTCAGC ACGGGTTTCT ATAAACACAG TCAAC GTCTTCCACA CACTTGGTCA GTATTTCCAG AAATTGGGAC GATGTTCAGT GAGAGTTTCT GTGAACACAG CCAAT	009
rat mouse human		TTGACAGTTG GCCCTCAGGT CATTGACAGCTG GCCCTCAGGT CATGAGACTTG GCCCTCAACT CATGAGCT CATGAGAGCT CATGAGCT CATG	TGGAAGTG TGGAAGTG TGGAAGTG	ATTGTCTTTC ACTGTCTTTC ACTGTCTACA	TGGAAGTG ATTGTCTTTC GAAGACACGG CCGGGCATAC ATTCCCATCT TGGAAGTG ACTGTCTTTC GAAGATACGG CCGGGCATAC ATTCCCATCT TGGAAGTG ACTGTCTACA GAAGACATGG ACGGGCATAT GTTCCCATCG	CCGGGCATAC CCGGGCATAC ACGGGCATAT	CCGGGCATAC ATTCCCATCT CCAAA CCGGGCATAC ATTCCCATCT CGAAG ACGGGCATAT GTTCCCATCG CACAA	675 675 675
)H	FIG. 2A-2			6/

750 750 750	825 825 825	006 006	966 966 975	1029 1032 1004
GTGAAAGACG TGTATGTGAT AACAGATCAG ATCCCTATAT TCGTGACCAT GTACCAGAAG AATGACCGGA ACTCG GTGAAAGATG TGTATGTGAT AACAGATCAG ATCCCTGTAT TCGTGACCAT GTCCCAGAAG AATGACAGGA ACTTG GTGAAAGATG TGTACGTGGT AACAGATCAG ATTCCTGTGT TTGTGACTAT GTTCCAGAAG AACGATCGAA ATTCA	TCTGATGAAA CCTTCCTCAG AGACCTCCCC ATTTTCTTCG ATGTCCTCAT TCACGATCCC AGTCATTTCC TCAAC TCTGATGAGA TCTTCCTCAG AGACCTCCCC ATGTCTTCG ATGTCCTCAT TCATGATCCC AGCCACTTCC TCAAC TCCGACGAAA CCTTCCTCAA AGATCTCCCC ATTATGTTTG ATGTCCTGAT TCATGATCCT AGCCACTTCC TCAAT	TACTCTGCCA TITCCTACAA GTGGAACTIT GGGGACAACA CTGGCCTGTT TGTCTCCAAC AATCACACTT TGAAT GACTCTGCCA ITTCCTACAA GTGGAACTIT GGGGACAACA CTGGCCTGTT TGTCTCCAAC AATCACACTT TGAAT TATTCTACCA TTAACTACAA GTGGAGCTTC GGGGATAATA CTGGCCTGTT TGTTTCCACC AATCATACTG TGAAT	CACACGTATG TGCTCAATGG AACCTTCAAC TTTAACCTCA CCGTGCAAAC TGCAGTGCCG GG	-TGCC-CC-T CACCCACACC TTCGCCTTCT TCTTCGACTT CTCCTTCGCCTGCA TCTTCGCCTT CATGCC-C-TCCCCC TTCGCCTTCG ACTCCGCCTT CACCTTCAAC TCCGCCCTTA CCTTCGCCCT CACCT CCGCCACCAC CACCCAGACC TTCAAAAAA
rat mouse human	rat mouse human	rat mouse human	rat mouse human	rat mouse human

IG. 2A-3

1101	1176	1251	1326	1401
1107	1182	1257	1332	1407
1059	1134	1209	1284	1359
TTAATGCCTA CTGGCTACAA ATCCATGGAG CTGAGTGACA TTTCC	TAAGGT TACTTCAGAG CCACCATCAC AATTGTAGAT GGAATCCTAG AAGTC	AACATCATCC AGGTAGCAGA TGTCCCAATC CCCACACTGC AGCCTGACAA CTCACTGATG GACTTCATTG TGACC	TCCAAAGGGG CCACTCCCAC GGAAGCCTGT ACGATCATCT CTGACCCCAC CTGCCAGATC GCCCAGAACA GGGTG	TGCAGCCCGG TGGCTGTGGA TGAGCTGTGC CTCCTGTCCG TGAGGAGGC CTTCAATGGG TCCGGCACGT ACTGT
TTAATGCCTA CTGGTTACAA ATCCATGGAG CTGAGTGACA TTTCC	TAAGGC TACTTCAGAG CCACCATCAC AATTGTAGAG GGGATCCTGG AAGTC	AGCATCATGC AGATAGCAGA TGTCCCCATG CCCACACGGC AGCCTGCCAA CTCCCTGATG GACTTCACTG TGACC	TGCAAAGGGG CCACCCCCAT GGAAGCCTGT ACGATCATCT CCGACCCCAC CTGCCAGATC GCCCAGAACC GGGTC	TGCAGCCCTG TGGCTGTGGA TGGGCTGTGC CTGCTGTCTG TGAGAAGAGC CTTCAATGGG TCTGGCACCT ACTGT
TTAGGACCTG CTGGTGACAA CCCCCTGGAG CTGAGTAGGA TTCCT	TAAGGC TACTTTCAAG CCACCATCAC AATTGTAGAG GGAATCTTAG AGGTT	AACATCATCC AGATGACAGA CGTCCTGATG CCGGTGCCAT GGCCTGAAAG CTCCCTAATA GACTTTGTCG TGACC	TGCCAAGGGA GCATTCCCAC GGAGGTCTGT ACCATCATTT CTGACCCCAC CTGCGAGATC ACCCAGAACA CAGTC	TGCAGCCCTG TGGATGTGGA TGAGATGTGT CTGCTGACTG TGAGACGAAC CTTCAATGGG TCTGGGACGT ACTGT
TTAATGCCTA	racttcagag	CCCACACTG(ACGATCATC)	CTCCTGTCC(
TTAATGCCTA	racttcagag	CCCACACCG(ACGATCATC)	CTGCTGTCT(
TTAGGACCTG	ractttcaag	CCGGTGCCA1	ACCATCATT	CTGCTGACT(
	CAGATAAGGT CAGATAAGGC CAGATAAGGC CAGATAAGGC	AACATCATCC AGGTAGCAGA TGTCCCAATC AGCATCATGC AGATAGCAGA TGTCCCCATG AACATCATCC AGATGACAGA CGTCCTGATG	TCCAAAGGGG CCACTCCCAC GGAAGCCTGT ACGATCATCT TGCAAAGGGG CCACCCCCAT GGAAGCCTGT ACGATCATCT TGCCAAGGGA GCATTCCCAC GGAGGTCTGT ACCATCATTT	TGAGCTGTGC TGGGCTGTGC TGAGATGTGT
CCCACAT TATCAACACC TAGTCCCTCT TTGCCCACAT TATCAACACC TAGCCCCTCT	AATGAAAACT GCCGAATAAA CAGATAAGGT AATGAAAACT GCCGAATAAA CAGATAAGGC GATGAAAACT GCCAGATTAA CAGATAAGGC	AGGTAGCAGA AGATAGCAGA AGATGACAGA	CCACTCCCAC CCACCCCCAT GCATTCCCAC	TGGCTGTGGA TGGCTGTGGA TGGATGTGGA
CCCACAT TTGCCCACAT	AATGAAAACT AATGAAAACT GATGAAAACT	AACATCATCC AGCATCATGC AACATCATCC		
rat	rat	rat	rat	rat
mouse	mouse	mouse	mouse	mouse
human	human	human	human	human

FIG. 2A-4

rat	GTGAATTTCA CTCTGGGAGA CGATGCAAGC CTGGCCCTCA CCAGCGCCCT GATCTCTATC CCTGGCAAAG ACCTA 1476
mouse	GTGAATTTCA CTCTGGGAGA TGATGCAAGC CTGGCCCTCA CCAGCACCCT GATCTCTATC CCTGGCAAAG ACCCA 1482
human	GTGAACCTCA CCCTGGGGGA TGACAAAGC CTGGCTCTCA CGAGCACCCT GATTTCTGTT CCTGACAGAG ACCCA 1434
rat mouse human	GGCTCCCCTC TGAGAACAGT GAATGGTGTC CTGATCTCCA TTGGCTGCCT GGCCATGTTT GTCACCATGG TTACC 1551 GACTCCCCTC TGAGAGCAGT GAATGGTGTC CTGATCTCCA TCGGCTGCCT GGCTGTGCTT GTCACCATGG TTACC 1557 GCCTCGCCTT TAAGGATGGC AAACAGTGCC CTGATCTCCG TTGGCTGCTT GGCCATATTT GTCACTGTGA TCTCC 1509
rat	ATCTTGCTGT ACAAAAACA CAAGACGTAC AAGCCAATAG GAAACTGCAC CAGGAACGTG GTCAAGGGCA AAGGC 1626
mouse	ATCTTGCTGT ACAAAAAACA CAAGGCGTAC AAGCCAATAG GAAACTGCCC CAGGAACACG GTCAAGGGCA AGGGC 1632
human	CTCTTGGTGT ACAAAAAACA CAAGGAATAC AACCCAATAG AAAATAGTCC TGGGAATGTG GTCAGAAGCA AAGGC 1584
rat	CTGAGTGTTT TTCTCAGCCA TGCAAAAGCC CCGTTCTCCC GAGGAGCCG GGAGAAGGAT CCACTGCTCC AGGAC 1701
mouse	CTGAGTGTTC TCCTCAGTCA CGCGAAAGCC CCGTTCTTCC GAGGAGCACCA GGAGAAGGAT CCATTGCTCC AGGAC 1707
human	CTGAGTGTCT TTCTCAACCG TGCAAAAGCC GTGTTCTTCC CGGGAAACCA GGAAAAGGAT CCGCTACTCAA 1655
rat mouse human	AAGCCATGGA TGCTCTAA 1719 AAGCCAAGGA CACTCTAA 1725 AAACCAAGAATTTAAAG GAGTTTCTTA A 1683

		~	1			10	/18								
FIG. 2B-1	FIG. 2B-2	FIG 2B	<u>.</u>			10	710								
50	20		100	150	150	150	200	200	200	250	250	250	300	300	300
NNQLRGWSSD HNQLRGWSSD	HNQLNGWSSD	GSNITFVVNL GSNITFVVNL	GSNITFAVNL	DEDWEDNTSQ	DGDWEDGTSR	DSDGENGTGQ	SARVSINTVN	SARVSINTVN	SVRVSVNTAN	TMYQKNDRNS	TMSQKNDRNL	TMFQKNDRNS			LFVST'NHT'VN
HEQYPDHMRE HEQYPDHMRE	NERPSAYMRE	ALTSDSPALV VLTSDSPALV	VLTSDSPALV	YVYNWTTGAD	HVYNWTAGAD	YVYNWTAWSE	GQYFQKLGQC	GQYFQKLGRC	GQYFQKLGRC	VITDQIPIEV	VITDQIPVFV	VVTDQIPVFV	YKWNFGDNTG		YKWSFGDNTG
AAKRFRDVLG AAKRFRDVLG	AAKRFHDVLG	DSWEGGRVQA DSWEGGRVQA	NSWKGGRVQA	RSDLELASDP	RNDLGLTSDL	RNEAGLSADP	WNFVYVEHTL	WSFVYVFHTL	WNFIYVFHTL	IPISKVKDVY	IPISKVKDVY	VPIAQVKDVY	SHFLNYSAIS	SHFLNDSAIS	SHFLNYSTIN
LLLAAGLPLQ LLLAAGLPLQ	LLLAARLPLD	VWRRGEGRWK VWRRGDGRWK	VWKRGDMRWK	NGNIVYERNC	NGNIVYEKNC	NGNIVYEKNC	PFPRPHGRKK	PFPRPHGWKK	PFPHHPGWRR	IVFRRHGRAY	LTAGPOVMEV TVFRRYGRAY	TVYRRHGRAY	IFFDVLIHDP	IVFDVLI	IMFDVLIHDP
MESLCGVLVF MESLCGVLGF	MECLYYFLGF	ENEWDEQLYP ENEWDEHLYP	ENDWNEKLYP	VFPRCQKEDA	VFPRCQKEDA	IFPRCQKEDA	GOHLRFPDGK	SQHLRFPDRR	SHHNVFPDGK	LTVGPQVMEV	LTAGPOVMEV	human VTLGPQLMEV	SDETFLRDLP	SDEIFLRDLP	SDETFLKDLP
rat mouse	human	rat mouse	human	rat	mouse	human	rat	mouse	human	rat	mouse	human	rat	mouse	human

FIG. 2B-1

FIG. 2B-2

rat mouse human	HTYVLNGTFN HTYVLNGTFN HTYVLNGTFS	FNLTVQTAVP LNLTVQTAVP LNLTVKAAAP	GPCPSPTPS- GPCPPPSPST GPCPPPPP	-PSSSTSPSP PPSPSTPPLP	ASSPSPTLST SPSPLPTLST SK	348 350 334
rat	PSPSLMPTGY	KSMELSDISN	ENCRINRYGY	FRATITIVDG	ILEVNIIQVA	398
mouse	PSPSLMPTGY	KSMELSDISN	ENCRINRYGY	FRATITIVEG	ILEVSIMQIA	400
human	PTPSLGPAGD	NPLELSRIPD	ENCQINRYGH	FQATITIVEG	ILEVNIIQMT	384
rat	DVPIPTLQPD	NSLMDFIVTC	KGATPTEACT	IISDPTCQIA	QNRVCSPVAV	448
mouse	DVPMPTPQPA	NSLMDFTVTC	KGATPMEACT	IISDPTCQIA	QNRVCSPVAV	450
human	DVLMPVPWPE	SSLIDFVVTC	QGSIPTEVCT	IISDPTCEIT	QNTVCSPVDV	434
rat	DELCLLSVRR	AFNGSGTYCV	NFTLGDDASL	ALTSALISIP	GKDLGSPLRT	498
mouse	DGLCLLSVRR	AFNGSGTYCV	NFTLGDDASL	ALTSTLISIP	GKDPDSPLRA	500
human	DEMCLLTVRR	TFNGSGTYCV	NLTLGDDTSL	ALTSTLISVP	DRDPASPLRM	484
rat	VNGVLISIGC	LAMFVTMVTI	LLYKKHKTYK	PIGNCTRNVV	KGKGLSVFLS	548
mouse	VNGVLISIGC	LAVLVTMVTI	LLYKKHKAYK	PIGNCPRNTV	KGKGLSVLLS	550
human	ANSALISVGC	LAIFVTVISL	LVYKKHKEYN	PIENSPGNVV	RSKGLSVFLN	534
rat mouse human	HAKAPFSRGD HAKAPFFRGD RAKAVFFPGN	REKDPLLQDK QEKDPLLQDK QEKDPLLKNQ	PWML 572 PRTL 574 EFKGVS 560	FIG 28-2	0	

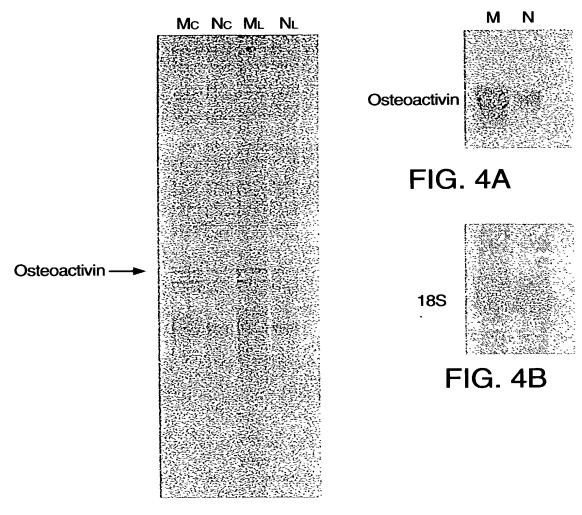


FIG. 3

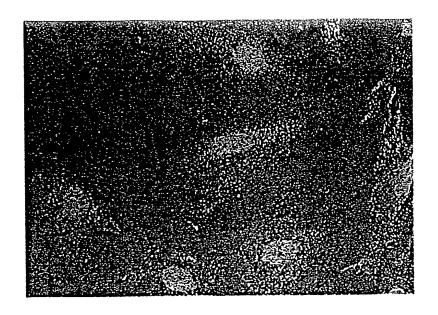


FIG. 5

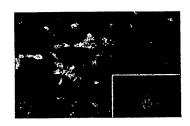
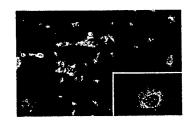


FIG. 5A



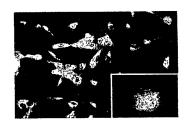


FIG. 5B FIG. 5C

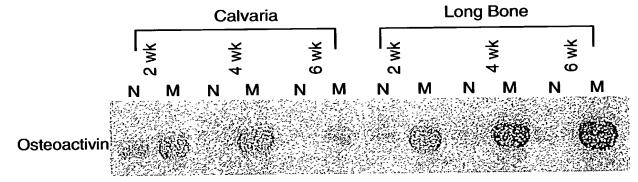
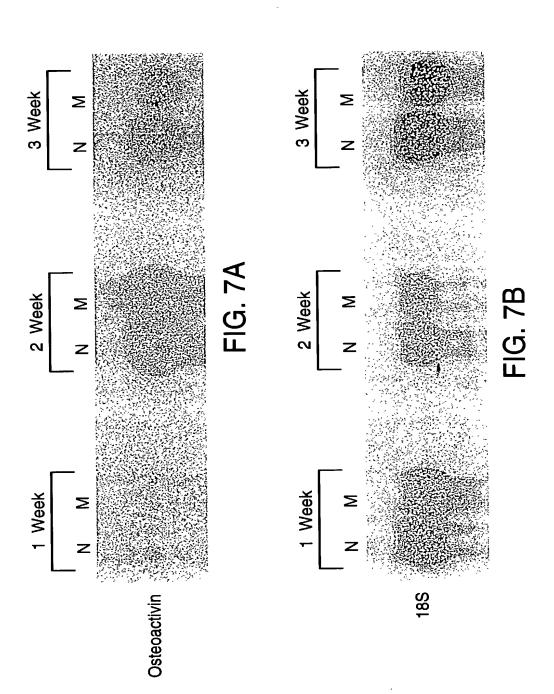


FIG. 6

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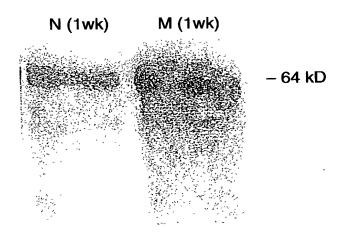
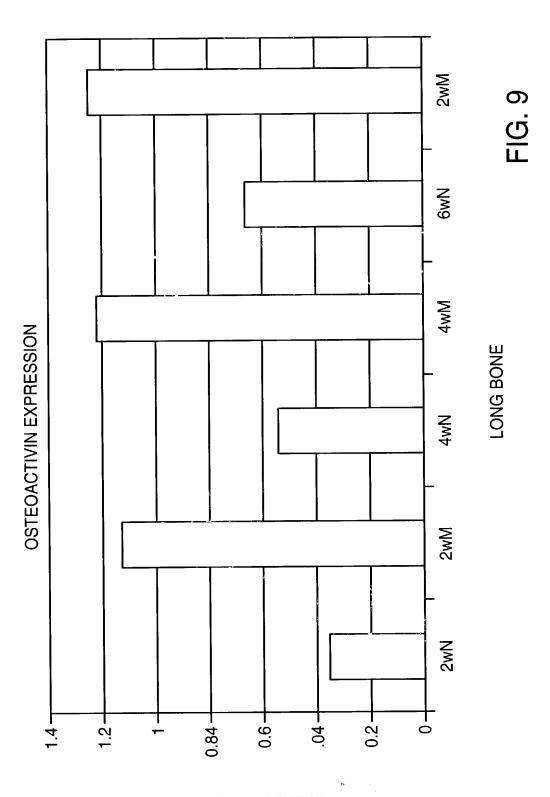


FIG. 8



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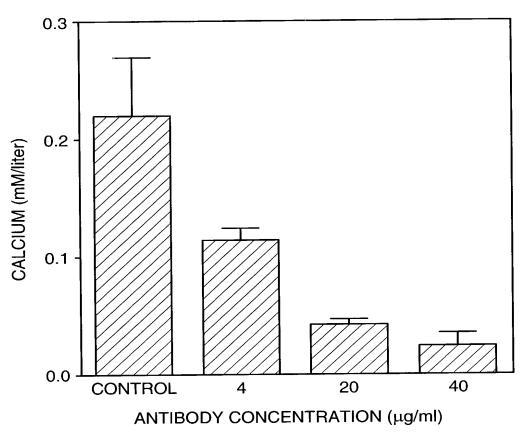


FIG. 10